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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/510,163	10/01/2004	Andrzej Niklewski	206,676	6580

7590 11/21/2006

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EXAMINER

DEUBLE, MARK A

ART UNIT PAPER NUMBER

3651

DATE MAILED: 11/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/510,163	NIKLEWSKI, ANDRZEJ	
	Examiner	Art Unit	
	Mark A. Deuble	3651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15 and 17-18 is/are rejected.
- 7) ☒ Claim(s) 16 and 19-21 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3-6, and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Dodge (U.S. Patent No. 672,358), as in the office action mailed March 15, 2006.

Dodge shows a belt conveyor **A** with a conveying upper run including a feed end at roller **C**, a discharge end **I**², a return lower run, and a curved extension **I**¹ that is concave with a radius of curvature that decreases as the belt ascends between an inlet lower portion and an outlet upper portion ending at the discharge end of the conveying upper run. The material support face of the curved extension present opposite marginal portions **a** each seated on a plurality of support rollers formed by sprockets **b**. A linear extension is arranged immediately downstream of the feed end so that it ends in the inlet portion of the curved extension. The linear extension presents an inclination that is less than a limit slope value for the belt conveyor. The belt imparts to the material thereon an ascending curved path that is substantially coplanar and opposite in relation to that imparted to the material in the inlet portion. This ascending curved path presents a curvature so as to product, on the material conveyed at a determined belt speed, a centrifugal force sufficient to maintain the material seated against the curved extension of the conveying upper run, until reaching the discharge end. Thus, Dodge shows all the structure required by claims 1, 3-6 and 8.

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3. Claims 1-2, 5, 7, and 9-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Winchip (U.S. Patent No. 5,996,769), as in the office action mailed March 15, 2006.

Winchip shows a crushing unit comprising a first belt conveyor 16 vertically disposed above a second belt conveyor 26 that is parallel and vertically aligned in relation to the first belt conveyor. Both belt conveyors are mounted on a vehicle chassis. The first belt conveyor 16 conducts bulk material to a classifying screen 18 whose discharge of rejected large material feeds a crusher 22 which releases the crushed material to a feed end of the upper run of the second belt conveyor. The second belt conveyor 26 has a conveying upper run including a feed end at arrow 66, a lifted discharge end at roller 54, a return lower run, and a curved extension around roller 36 that is concave and ascending between an inlet lower portion and an outlet upper portion ending at the discharge end of the conveying upper run. The material support face of the belt is seated, in each respective marginal portion, on the same corresponding support roller 36 with a radius of curvature that defines the single radius of curvature of the curved extension. A first feed end of the first belt conveyor is positioned in the curved extension of the second conveyor belt so that the discharge end of the second conveyor discharged material to a first feed end of the first belt conveyor. A linear extension is arranged immediately downstream of the feed end so that it ends in the inlet portion of the curved extension. The linear extension presents an inclination that is less than a limit slope value for the belt conveyor. While it is unclear if Winchip discloses an operating speed for the conveyor belt 26 that is fast enough so that centrifugal force will maintain the material seated against the curved extension, it has all the structure required by the claims. Therefore, because the independent claims are directed to a belt conveyor and a crushing

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unit per se and not to a method of operating such a belt conveyor or crushing unit, Winchip anticipates claims 1-2, 5-7, and 9-11.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 3-6, 8-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morrissey (U.S. Patent No. 2,210,093) in view of Dodge, as in the office action mailed March 15, 2006.

Morrissey shows a crushing unit comprising a first belt conveyor 13 vertically disposed above a second belt conveyor 29 that is parallel and vertically aligned in relation to the first belt conveyor. Both belt conveyors are mounted on a vehicle chassis. The first belt conveyor 13 conducts bulk material to a classifying screen 17-19 whose discharge of rejected large material feeds a crusher 34 which releases the crushed material to a feed end of the upper run of the second belt conveyor. The second belt conveyor 26 has a conveying upper run including a feed end, a lifted discharge end, and a return lower run. Instead of having a curved extension for lifting material to the first conveyor belt, it has a drum conveyor 42 with buckets 47.

However, Dodge shows a belt conveyor A with a conveying upper run including a feed end at roller C, a discharge end I², a return lower run, and a curved extension I¹ that is concave with a radius of curvature that decreases as the belt ascends between an inlet lower portion and an outlet upper portion ending at the discharge end of the conveying upper run. The material

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support face of the curved extension present opposite marginal portions a each seated on a plurality of support rollers formed by sprockets **b**. A linear extension is arranged immediately downstream of the feed end so that it ends in the inlet portion of the curved extension. The linear extension presents an inclination that is less than a limit slope value for the belt conveyor. The belt imparts to the material thereon an ascending curved path that is substantially coplanar and opposite in relation to that imparted to the material in the inlet portion. This ascending curved path presents a curvature so as to product, on the material conveyed at a determined belt speed, a centrifugal force sufficient to maintain the material seated against the curved extension of the conveying upper run, until reaching the discharge end.

Dodge teaches that the above described arrangement provides an improved means of elevating bulk material over ordinary elevating mechanisms such as buckets which wear faster than the belt of Dodge (col. 1, ln. 24-27). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to replace the second belt conveyor 29 and drum conveyor 42 of Morrissey with the belt conveyor of Dodge. When this is done, the lifted discharge end of the second belt conveyor would discharge material to a first feed end of the first belt conveyor and the first feed end of the first belt conveyor would be positioned within the curved extension of the second conveyor. Thus the apparatus of Morrissey as modified according to the teachings of Dodge would show all the structure required by claims 1, 3-6, 8-14.

6. Claims 12-15 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Winchip in view of Plaut (U.S. Patent No. 4,585,118), as in the office action mailed March 15, 2006.

Winchip shows generally all that is required by the claims except for the support rollers on which opposite marginal portions of the support face of the second conveyor belt are seated and which define the radius of curvature of the curved extension as required by claims 12 and 15. However, Plaut teaches that it is advantageous to provide pairs of self tracking rollers 10 (mounted on a common single shaft with external ends within bearings) that engage the marginal portions of a sandwich conveyor belt system of the type shown in Winchip because they keep the belts centered on the rollers and because they form a space for holding the material between the sandwiched belts. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to replace the roller 36 with a pair of rollers engaging the marginal portions of the first and second belt conveyors as taught by Plaut. When this is done, the resulting apparatus would have all the structure required by claims 12-15 and 17-18.

Response to Arguments

7. Applicant's arguments filed September 5, 2006 have been fully considered but they are not persuasive.

Applicant argues that none of the above discussed references shows "a curved longitudinal extension which forms an ascending curved path that is substantially coplanar and opposite in relation to that imparted to the material in the inlet portion." First, it should be noted that examiner asserted that Winchip and Dodge showed such a curved longitudinal extension and so only these two references will be discussed. Second, it is unclear which element of the above quoted language is missing from these two references as both clearly show longitudinally directed extensions that form ascending curved paths that are oriented in a direction coplanar with and opposite to the direction of the path at the inlet portion. The examiner speculates that

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the applicant may asserting that the paths of Winchip and Dodge are not coplanar in the fashion required by the claims because the inlet and outlet of the extensions do not lie in a common vertical plane in the same fashion that the inlet 43a and the outlet 43b of the path lie in common vertical plane along line IV-IV as shown in Fig. 3. However, the language of the claims does not require that the inlet and outlet of the path be so oriented and it is clear that the path of the extension is coplanar with the path at the inlet portion at least in that both lie in a vertical plane parallel to the longitudinal direction (i.e. the plane of the page when the extensions are viewed in profile).

Allowable Subject Matter

8. Claims 16 and 19-21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark A. Deuble whose telephone number is (571) 272-6912.

The examiner can normally be reached on Monday through Friday except for alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene O. Crawford can be reached on (571) 272-6911. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

md

MARK A. DEUBLE
PATENT EXAMINER

